



A CASE REPORT: BEZOLD’S ABSCESS MASQUERADING NECK CARBUNCLE

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Introduction:
Bezold’s abscess was first described by Friedrich Bezold in 1881 as a deep neck abscess caused by an intertemporal complication of coalescent mastoiditis ¹. It occurs due to accumulation of pus in the digastric sulcus which drains through the medial wall of the mastoid process. It is a well-known but rare complication of otitis media. Since the advent of antibiotics, the incidence together with the mortality rate has reduced dramatically ². Intravenous antibiotics, drainage of abscess and mastoidectomy are the gold standard of management. Here, we report a case of a late presentation of a large Bezold’s abscess with skin involvement.

Case presentation:
A 43-year-old male was referred from the emergency department to us with left otalgia, otorrhoea, and left neck swelling for 2 weeks. Examination showed lateral left neck swelling, which was tender, erythematous and had multiple puncta. Otoscopic examination shows presence of pus in the left ear. He was found to have undiagnosed diabetes as his blood glucose level was 23.4mmol/L.
Contrast enhanced CT neck showed extensive intramuscular rim enhancing collection at the left posterolateral aspect of the neck with intra-auricular extension with left mastoid air cells erosion (Figure 1,2 and 3). The patient was started on intravenous piperacillin-tazobactam and metronidazole. He underwent left neck saucerization with left cortical mastoidectomy under general anaesthesia. Intraoperatively, there was pus in the left middle ear cavity, mastoid cavity and mastoid tip, extending to the left postauricular region with involvement of skin and sternocleidomastoid muscle. Unhealthy tissue at the neck was debrided. Approximately 100 mls pus was eventually drained. The patient was hospitalized and discharged from hospital after a week. Second surgery was done 42 days after the first surgery to explore the middle ear, debride and cover the wound with full thickness skin graft harvested from the left inguinal area. He was discharged home a few days post-operatively. Patient recovered well and his wound was clean with no postoperative complications.

Discussion:
Otomastoiditis, an infection of the middle ear and mastoid bone, often arises from chronic otitis media or untreated acute otitis media. In the literature review by Vallenggia et al. there are less than 100 cases reported since 1898 ³. When the infection extends beyond the mastoid bone, it can lead to severe complications such as intracranial infection, abscess formation, or deep neck space infections, which are associated with significant morbidity and mortality if not promptly managed ⁴. The primary goal in the treatment of otomastoiditis with associated deep neck abscess is rapid eradication of the infection. Empiric broad-spectrum intravenous antibiotics with good cerebrospinal fluid (CSF) penetration, are critical in preventing the progression of the infection ⁵. In addition to intravenous antibiotics, surgical intervention such as mastoidectomy and abscess drainage is essential for effective management and the prevention of further complications. Based on the cases reported from 2000 to 2020 in PubMed, among the 28 patients with available treatment data, 21 (75%) underwent mastoidectomy, while the remaining eight did not, including two children. This indicates that surgical treatment can be customised based on mastoid bone pneumatization and the extent of the neck abscess ¹. The decision to perform a left neck saucerization and cortical mastoidectomy was pivotal in ensuring that the infection was adequately controlled, and the involved tissue was thoroughly debrided. In this patient, the presence of pus in the middle ear cavity, mastoid cavity and postauricular region necessitated aggressive surgical intervention. Second procedure was done to debride and cover the wound with a full-thickness skin graft, demonstrating the need for continued attention to wound care and healing.

Conclusion:
This case underscores the importance of early intervention in the management of otomastoiditis with extracranial complications. Prompt administration of broad-spectrum antibiotics and timely surgical drainage are essential to prevent life-threatening complications. Surgical intervention should be tailored for individual patients to ensure complete drainage and removal of necrotic tissue.

References:
1. Bezold, F. v. (1881). Ein neuer Weg für Ausbreitung eitriger Entzündung aus den Räumen des Mittelohrs auf die Nachbarschaft und die in diesem Falle Einzuschlagende Therapie. Deutsche Medizinische Wochenschrift, 7, 381-385.
2. Alkhaldi AS, Alwabili M, Albilasi T, Almuhan K. Bezold's Abscess: A Case Report and Review of Cases Over 20 Years. Cureus. 2022 Jan 23;14(1):e21533. doi: 10.7759/cureus.21533. PMID: 35223308; PMCID: PMC8863901.
3. Vallenggia S, Minerva M, Muraro E, Bovo R, Marioni G, Manara R, et al. Epidemiologic, Imaging, and Clinical Issues in Bezold ’ s Abscess: A Systematic Review. Tomography. 2022;8(2):920-32.
4. Hicham Lyoubi, Berrada, O., Adil Lekhbal, Reda Allah Abada, & Mahtar, M. (2020). Bezold ’ s abscess: An extremely rare complication of suppurative mastoiditis: Case report and literature review. International Journal of Surgery Case Reports, 77, 534–537.
5. Winters, R., Hogan, C. J., Lepore, M. L., & Geiger, Z. (2022). Bezold Abscess. PubMed; StatPearls Publishing.



Figure 1, 2 and 3: Contrast enhanced computed tomography scan images of Bezold’s abscess



Figure a: Picture of initial presentation
Figure b: Post operative picture.
Figure c: Wound after full thickness skin graft